Claims

1. System (1) for presentation of information, especially
   augmented-reality information for at least one user (2) with
   • at least one recording unit (3) for recording an environment
5   and for generation of corresponding environment information
     (4) which identify a position and/or an orientation of the
     system (1) in relation to the environment,
   • at least one simulation system (7) for a generation of
     simulation data (12) and
10 • at least one processing unit (8) for linking the environment
     information (4) and image information (6) modified
     continuously on the basis of the simulation data (12) and
     stored in a first storage medium (5).

2. System in accordance with claim 1,
15 characterized in that the processing unit (8) is embodied such
   that it is used for the calculation of concealments of virtual
   objects (18a, 18b) by a real installation (11) existing in the
   recording area of the system (1) on the basis of image
   information (6) stored in the first storage medium (5) as well
20 as for a generation of a volume of data (9) for description of
   the virtual objects (18a, 18b), with the surfaces of the
   virtual objects (18a, 18b) concealed by the real installation
   (11) being edited out.

3. System in accordance with one of the previous claims,
25 characterized in that the system (1) features at least one
   reproduction unit (10) for presentation of the volume of data
   (9) generated by the processing unit (8).

4. System in accordance with one of the previous claims,
   characterized in that the system features at least one
30 application controller (14) for activation of the simulation
   system (7) and/or at least of at least one real process.

5. System in accordance with one of the previous claims, characterized in that the system (1) features at least one user interface (15) which allows the user to control the simulation system (7) and/or at least one real process.

6. System in accordance with one of the previous claims, characterized in that the system (1) features a second storage medium (13) in which current status values of the real process, especially sensor values and/or actuator values to be set, are stored.

7. System in accordance with one of the previous claims, characterized in that the simulation system (7) is embodied such that the execution sequence of a simulation can be continuously influenced by the status values stored in the second storage medium (13) and/or the status values stored in the second storage medium (13) can be modified by the simulation system (7).

8. System in accordance with one of the previous claims, characterized in that the system (1) features at least one process link (17) which allows the modification of the status of a real process, especially depending on status values stored the second storage medium (13), and the recording of the current status of a real process.

9. System in accordance with one of the previous claims, characterized in that the system (1) features a third storage medium (16) in which data is stored which allows a reconstruction of a process simulated by means of the simulation system (7).

10. Method for presentation of information, especially augmented-reality information for at least one user (2) in which

- an environment is recorded with the aid of at least one
  recording unit (3) and corresponding environment information
  (4) is generated, which identifies a position and/or an
  orientation of the system (1) in relation to the
5   environment,
- simulation data (12) is generated with the aid of at least
  one simulation system (7) and
- the environment information (4) and image information (6)
  modified continuously on the basis of the simulation data
10   (12) and stored in a first storage medium (6) are linked
  with the aid of at least one processing unit (8).

11. Method in accordance with claim 10,
characterized in that, with the aid of the processing unit (8)
concealments of virtual objects (18a, 18b) by a real
15 installation (11) existing in the recording area of the system
(1) are calculated on the basis of image information (6)
stored in the first storage medium and a volume of data (9) is
generated for description of the virtual objects (18a, 18b),
with the surfaces of the virtual objects (18a, 18b) concealed
20 by the real installation (11) being edited out.

12. Method in accordance with one of the claims 10 or 11,
characterized in that the volume of data (9) generated by the
processing unit (8) is presented with the aid of at least one
reproduction unit (10).

25 13. Method in accordance with one of the claims 10 to 12,
characterized in that the simulation system (7) and/or at
least one real process is activated with the aid of at least
one application controller (14).

14. Method in accordance with one of the claims 10 to 13,
30 characterized in that the user is allowed to control an
activation of a simulation system (7) and/or of at least one

real process with the aid of at least one user interface (15).

15. Method in accordance with one of the claims 10 to 14, characterized in that current status values of the real process, especially sensor values and/or actuator values to be set are stored in a second storage medium (13).

16. Method in accordance with one of the claims 10 to 15, characterized in that the execution sequence of a simulation can be continuously influenced by the status values stored in the second storage medium (13) and/or the status values stored in the second storage medium (13) can be modified by the simulation system (7).

17. Method in accordance with one of the claims 10 to 16, characterized in that the state of a real process is modified with the aid of at least one process link (17), especially depending on status values stored in the second memory medium (13), and/or the current state of a real process is recorded with the aid of at least one process link (17).

18. Method in accordance with one of the claims 10 to 17, characterized in that data is stored in a third storage medium (16) which allows a reconstruction of a process simulated by means of the simulation system (7).